Yanique Gaynor

**Midterm Lesson Plan 2017**

**Grade: 2nd**

**Topic**: Amazing Water

**Lesson Objectives**:

Students will:

-describe urban forms of pollutions.

-provide reason why people should monitor what they put on their lawns or in the streets.

-identify ways to treat urban runoff.

**New York State Standards for Science- Grade 2**

**Scientific Inquiry:**

**1.4.1.** Students ask 'why' questions in attempts to seek greater understanding concerning objects and events they have observed and heard about.

**1.4.3.** Students develop relationships among observations to construct descriptions of objects and events and to form their own tentative explanations of what they have observed.

**1.6.2.** Students interpret organized observations and measurements, recognizing simple patterns, sequences, and relationships.

**1.6.3.** Students share their findings with others and actively seek their interpretations and ideas.

**Materials**

-Can or bottle labeled “chemicals or oil”

-Chalk, self-sticking paper flour or other materials to represent pollutants found in urban runoff

-Visual images

**Vocabulary Words:**

-runoff

-urban watershed

-drainage pipes

-pollutants

-storm drains

-contaminants nonpoint source pollution

-precipitation

-wastewater treatment plant

-storm drains

Background Information: Students will review and discuss what they already know about water. Students will then learn that removing water quickly and efficiently from city streets, parking lots and schoolyards after precipitation or snowmelt is an important task for municipal governments. The water flowing through city drainage pipes is often referred to as an urban watershed. Before storm drainage system were common, cities experienced localized flooding because of poor nonexistent drainage patterns; storm water also caused sewer system to overflow. Both circumstances introduced significant health and safety concerns and necessitated solutions.

**Procedures and Timing 20 minutes**

1. Teacher will review vocabulary words and provide definition. Teacher will also provide students with visual images.
2. Students will observe a can or bottle labeled chemicals or oil. Teacher will explain to students that we will need to dispose of the chemicals and that we will dump them in the street in front of the school.
3. Students will be asked if this is a good idea why or why not? Students will describe what they think will happen to the waste material once it is on the ground.
4. Student’s responses will be recorded on chart paper.
5. Students will be asked to draw a picture showing what they think will happen?

**Outdoor Activity 20 minutes**

1. Students will be escorted outside of the building to begin the experiment.
2. Teacher will ask students to look on the street and describe what they see.
3. Teacher will then give each student a turn to pour the content on the street and observe what is happening as the substance is poured on to the street.
4. Students will then return to the classroom and discuss what they think is going to happen? Where do you think the materials that we pour on the street will go? How do you think it will affect the water?
5. Student’s responses will be recorded on chart paper.

**Independent Work 20 minutes:**

-Students will then be asked to write about what they observed and draw a picture based on the experiment outside and the discussion in class. They will use the following questions to guide them.

1. Where do you think the materials that we pour on the street will go?
2. How do you think it will affect the water?
3. How will the chemical and oil affect and pollute the environment?

**Students work will be assessed based on the following rubric:**

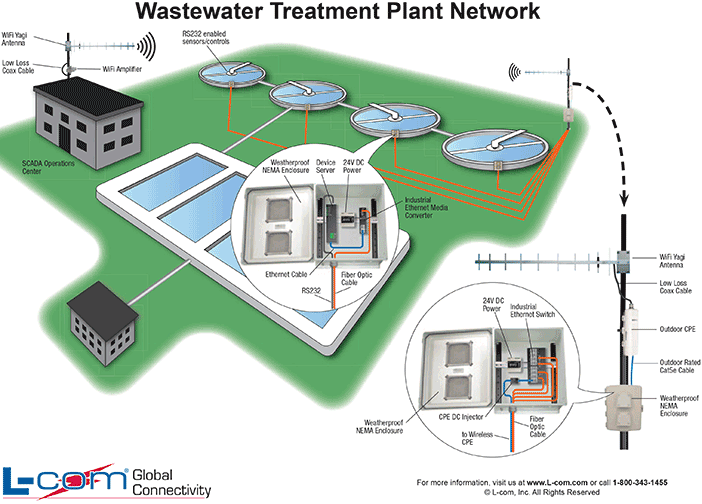
Second Grade Science Rubric

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1-NO EFFORT** | **2-BEGINNER** | **3-ON MY WAY** | **4-ALMOST THERE** | **5-MASTERY** |
| **Pictures**  -Unfinished drawing  -Drawing does not match writing  **Writing**  -Unfinished writing  -No use of vocabulary  -No evidence of concept | **Pictures**  -Drawing not detailed  **Writing**  -Writing too short  -Slight evidence of concept mentioned  -Disorganized information  -Lacks vocabulary | **Pictures**  -Some details in drawing  **Writing**  -Some detail in drawing  -Some evidence of concept understanding  -Some order to the writing  -Vocabulary sometimes used incorrectly | **Pictures**  -Several details in drawing  **Writing**  -Detailed writing  -Understand most of the concept  -Writing organization flows  -Makes use of some vocabulary | **Pictures**  -Drawing is heavily detailed  **Writing**  **-**Writing is heavily detailed  -Strong evidence of understanding of concept  -Writing is well organized  -Uses many vocabulary words correctly |

**Bibliography**

**Project Wet Curriculum and Activity Guide2.0 2011 by the** **Project WET Foundation**

**Visual Images**



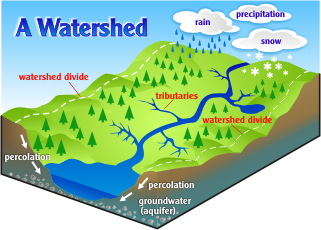
**Drainage Pipe**



**Storm Drains**



**Watershed**





**Pollutants**



